Notice of Allowability	Application No.	Applicant(s)	
	10/611,999	NAM ET AL.	
	Examiner	Art Unit	
	Yon Couso	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *7/3/03*.

2. ☒ The allowed claim(s) is/are *1-15*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 7/3/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

1. The following is an examiner's statement of reasons for allowance: prior art fails to teach or suggest a spatial image information system for efficient storage and retrieval of spatial images acquired by an image acquisition device provided with a navigation system, the system comprising; a spatial image query interface component section for performing an interface function for interfacing with an external client, and processing a spatial image database construction query, spatial image retrieval/insertion/deletion queries, and a spatial object information manipulation query in the spatial images, a spatial image meta information component section for managing schema and index information of spatial image sequences, and processing a query about index information if the query about the index information is inputted from the spatial image query interface component section, a spatial image storage/retrieval component section for processing storage, retrieval and management of the spatial image sequences according to the query of the spatial image query interface component section, a spatial image to real coordinate conversion component section for receiving and converting the spatial image and a specified position in the image into a real-world coordinate (x,y,z) or receiving and converting the real-world coordinate (x,y,z) and the spatial image into the specified position in the spatial image according to the query of the spatial image query interface component section, and an open type spatial image database interface component section for storing and managing the spatial images by interfacing the spatial image meta information component section, the spatial image storage/retrieval component section and the spatial image to real coordinate

conversion component section with a storage system irrespective of a kind of the storage system.

Prior art also fails t o teach or suggest a method for retrieving spatial images including a designated area in a spatial image information system for storing the spatial images acquired by an image acquisition device provided with a navigation system using a database structure composed of spatial image sequence tables for storing the spatial images and information, spatial image object tables for storing information on spatial objects existing in spatial image sequences, a spatial image sequence information table including schema information and indexes of the spatial image sequences and summary information, and a spatial image sequence index table for managing indexes so as to promptly retrieve the spatial image sequence tables, the method comprising; a spatial image sequence filtering step of retrieving the spatial image sequences including the designated area using the spatial image sequence indexes of the spatial image sequence index table, a spatial image filtering step of retrieving the spatial images including the designated area with respect to the spatial image sequences retrieved at the spatial image sequence filtering step, and a spatial image refining step of checking whether a real spatial image includes the designated area by loading the spatial images, which are retrieved at the spatial image filtering step, from the spatial image sequence tables.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Claims 1-15 are allowed.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gagvani et al is cited because the reference teaches displaying geo-spatial images using geo-registration system.

Kumar is cited because the reference teaches a method and an apparatus for performing geo-spatial registration of imagery.

Hsu et al is cited because the reference teaches a method and an apparatus for performing geo-spatial registration of imagery.

Kuo teaches method and apparatus for acquiring digital maps.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (571) 272-7448. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis, can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public

PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YON J. COUSO
PRIMARY EXAMINER

YJC

March 21, 2007